ABSTRACT

A method for classification of image regions by probabilistic merging of a class probability map and a cluster probability map includes the steps of a) extracting one or more features from an input image composed of image pixels; b) performing unsupervised learning based on the extracted features to obtain a cluster probability map of the image pixels; c) performing supervised learning based on the extracted features to obtain a class probability map of the image pixels; and d) combining the cluster probability map from unsupervised learning and the class probability map from supervised learning to generate a modified class probability map to determine the semantic class of the image regions. In one embodiment the extracted features include color and textual features.